

Harvard Medical Alumni Bulletin

March/April 1978



New, Exclusive Healthco Leasing Programs Offer Unique Benefits and Flexible Plans

...to the new physician
...to the established physician
...in any tax bracket

Whether you're opening a new office, expanding an existing office, or purchasing new equipment for your established office, you should consider LEASING as a means of financing.

To provide the profession with adequate financial assistance for equipment and consumable purchases, leasehold improvements and working capital requirements, Healthco has formed a wholly owned financing subsidiary...Healthco Professional Services Corporation (HPSC).

Staffed with experienced financial people, HPSC works closely with Healthco equipment specialists in all of our supply centers, to develop the best possible financing arrangements for each customer.

WHY LEASING?

Because it allows the new physician to set up practice with a finance plan tailored to his cash flow needs; it allows the established physician to replace or add to his present equipment without affecting his credit rating or disturbing his cash flow. Many physicians are becoming aware of the benefits of leasing and of the helpful financial guidance offered by HPSC.

WHY HEALTHCO?

Because Healthco has established this wholly owned subsidiary, HPSC, to provide the profession with adequate financial guidance. HPSC offers many plans. All are individually programmed to meet your personal financial requirements and to insure flexible financing of equipment, consumable supplies and leasehold improvements.

Healthco's leasing company offers many options that are not available from other financing sources.

1. Prepayment without penalty.
2. Competitive rates.
3. Trade-up privileges on any leased equipment without having to pay off the entire note.
4. Step-up payment programs.
5. Personalized financial guidance.

For information regarding HPSC's 100% tax deductible leasing programs or any other type of financing, contact your local Healthco representative. We look forward to assisting you with a plan that will satisfy your financial needs.

Healthco



MEDICAL SUPPLY

25 Stuart Street, Boston, MA 02216
(617) 423-6045

Harvard Medical Alumni Bulletin

march/april 1978 vol. 52 no. 4

Editor
George S. Richardson '46

Managing Editor
Deborah W. Miller

Assistant Editor
Gwen Frankfeldt

Editorial Board
Robert S. Blacklow '59, Robert M. Goldwyn '56,
Franz J. Ingelfinger '36, Betty Lee '80, John B.
Levine '79, Marshall deG. Ruffin, Jr. '78, Guillermo
C. Sanchez '49, J. Gordon Scannell '40, Eleanor
Shore '55, Prentiss B. Taylor, Jr. '77.

Association Officers
Thomas B. Quigley '33, president; William R.
Christensen '42, president-elect; Alexander H. Bill
'39, past-president; Jane G. Schaller '60, vice
president; John P. Merrill '42, secretary; Fiorindo A.
Simeone '34, treasurer.

Councillors
Edward Atwater '55, Karl F. Austen '54, Edwin H.
Cassam '66, Herschel D. Collins '52, Patricia
Come '72, John P. Dixon '62, Grant V. Rodkey
'43A, Nina Tolkoff-Rubin '68, T. Franklin Williams
'50.

Representative to Associated Harvard Alumni
Curtis Prout '41

Director of Alumni Relations
Perry J. Culver '41

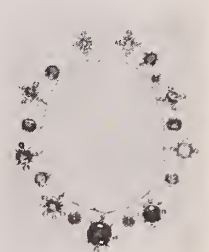
Chairman of the Alumni Fund
Carl W. Walter '32

The *Harvard Medical Alumni Bulletin* is published
bi-monthly at 25 Shattuck St., Boston, Mass.
02115. © by the Harvard Medical School Alumni
Association. Third class postage paid at Burlington,
Vermont.

2	Overview
10	The operating room <i>by Steve Hoffmann</i>
12	Elijah and Ezekiel on Mount Mica <i>by George E. Gifford, Jr.</i>
16	Health care in the new China <i>by Gilbert S. Omenn</i>
22	Musings
23	From Townsend Street to Brookline Avenue <i>by Arthur J. Linenthal</i>
28	Alumni Notes
35	Death Notices

Credits: p. 2, Daniel Bernstein; p. 4, Bob Graham of Children's Hospital
Medical Center; p. 5 (top), Hutchins Photography, Inc.; (bottom),
Jeff Koetsch; p. 7, Massachusetts General Hospital News Office;
p. 8, David Low '80; p. 11, Linda Popper; pp. 12, 13, from *The
History of Mount Mica* by Augustus Choate Hamlin; p. 14, courtesy
of Professor B. M. Schaub; pp. 16-21, Gilbert S. Omenn '65; pp. 23,
26 (top), 27, courtesy of the Beth Israel Hospital; pp. 24-25, courtesy
of Arthur J. Linenthal '41; 26 (bottom), from *The Early Days of the
Beth Israel Hospital* by Herman Dana; p. 29, David Gunner.

Cover: "A vivid gleam of green flashed from an object on the roots of a
tree." The object was a deposit of tourmaline, discovered at Mt.
Mica, Maine by two young college students in 1820. The necklace
(crafted in the late 1800s) — a bedazzling array of seventy
tourmalines from the Mt. Mica excavation — rests securely at
Harvard's Mineralogical Museum, valued especially for its historical
origins. The large center stone weighs 34.25 carats. Turn to page 12
for the tale of the tourmalines.



FORECAST FOR JUNE 1 AND 2, 1978:

Sunny, high in the 70s with a mild off-shore breeze, barometric pressure 30.2 inches and steady. A scattering of tents on the Harvard Medical School Quadrangle will accommodate the hundreds of alumni/ae returning for provocative talks, satisfying refreshment, and congenial mingling. Mark your calendar for two perfect spring days of intellectual and social enrichment. Long-range forecast: an idyllic weekend for reunion frolics.

Thursday, June 1: Scientific Symposium

Thursday, June 1: Class Day

Friday, June 2: Alumni Day

Friday, June 2 — Sunday, June 4: Reunions

Exercise your alumni/ae franchise! Sign and put the 1978 ballot in the mail before May 22.

Overview

Deans of the Round Table

The quadrumvirate of deans mapped out last spring by Dean Daniel C. Tosteson is now complete. The final member of the team is S. James Adelstein '53, professor of radiology at HMS and director of the Joint Program in Nuclear Medicine, who assumed the post of Dean for Academic Programs on March 1.

At the faculty meeting of February 24, Dean Tosteson presented his three appointees to the faculty and outlined their responsibilities; each of the new deans then spoke briefly about some aspects of his work.

Dr. Adelstein has three major areas of responsibility: representing the Dean's Office in the planning and conduct of the Medical School's programs leading to the M.D. and Ph.D. degrees; administering the procedures for faculty appointments and promotions; and fostering collaborative research and teaching ventures among the faculty, across departmental and institutional lines. He will thus be working primarily with the faculty; as he told the meeting, "It is the faculty that . . . preserve the sense of accomplishment and excitement [at HMS] and it is the job of the Dean's Office to help make this possible in any way that it can."

One of the links between Dr. Adelstein's present duties and his former activities is the M.D.-Ph.D. program, of which he has been associate director since its inception in 1974. That program was initiated to meet the needs of medical students who realized that they wanted a fuller grounding in basic science. Originally, enrollment in the combined degree program provided access only to degrees within the University's Division of Medical Sciences; however, its scope has begun to broaden. "It has become apparent," Dr. Adelstein told the faculty, "that the formal M.D.-Ph.D. program should be expanded to take advantage of the wide range of edu-



Whither HMS? is the topic as Deans (l to r) Federman, Meadow, Tosteson, Adelstein and Spellman gather for their weekly Monday morning conclave.

cational opportunities available at Harvard University and at the Massachusetts Institute of Technology. We believe that students will be particularly interested in the life sciences, but that some will pursue studies in the physical sciences and engineering as well as selected social science areas. Our application for renewal of support for the Medical Scientist Training Program has been written to include these increased opportunities." Dr. Adelstein hopes to see the M.D.-Ph.D. program's present enrollment of thirty-five grow to forty-eight by 1979, with future expansion to accommodate sixty-four students, making it the largest program of its kind in the US.

Daniel Federman '53, who became Dean of Students and Alumni/ae on November 1, has within his purview the areas of admissions, student records, student advising, and interactions with the Alumni Association. He told the faculty meeting about efforts now underway to increase the possibilities for HMS students to do research during summer breaks and as a supplement to their regular curriculum. "With the help of the department chairmen, we have established a system in which students can be put in touch with a faculty member doing research in an area that interests the student. We will be making some School funds available to supplement monies available in the department's or individual faculty member's budget. The response has been extremely gratifying and the program has been announced to the students; it has stimulated a lot of interest. On the basis of our experiences this year, we expect to seek outside funds for a broadened program of research experi-

ences for medical students. It seems ironic that this is required at HMS when so many previous students have had careers which were built upon student research experiences. We are determined to make this prospect available again at Harvard Medical School."

Dr. Federman also reported on the School's successful enrollment of nine American transfer students from foreign medical schools, in compliance with the newly amended health manpower regulations. Of the ninety applicants for these new places, Dr. Federman and Admission Director Oglesby Paul '42 interviewed twenty and selected the nine from among them. Dr. Federman said that "we are enormously impressed by their zeal to study. Eight of the nine are studying in a foreign language as well as in English. We think they can do the work and fit in here as students."

The Dean for Medical Services, Mitchell Spellman, M.D., who began work here on February 1, is concerned with the Medical School's interactions, both with its teaching hospitals and other affiliated institutions, and also with the state and federal governments. In his remarks to the faculty, Dr. Spellman addressed himself to the latter area. In endeavoring to play a role in the formation of government health policy, he said, "the challenge for us . . . is to mount responsive and creative leadership without being perceived as reactive and politically inept." Dr. Spellman's office will evaluate legislation as it is proposed, formulate options for Harvard positions, and contact legislators to offer appraisal of the legislation's impact. Faculty opinion will be sought, and the faculty will be kept up to

date on the status of bills in which the School is taking an interest. In carrying out these activities, as well as in guiding the School's relations with its teaching hospitals, Dr. Spellman will be assisted part time by Ms. Jane Corlette, Ms. Polly Mansfield, Ms. Patty Perry and Richard Ryan, Ph.D.

"With the objective of advancing the health of the public," Dr. Spellman summed up, "the challenge of the medical school is to design (and, in the limited context of teaching and research, implement) useful and acceptable approaches to fulfilling the public role of medical education. Optimally, three conditions should prevail: scholarship and the search for knowledge will be esteemed as public services and recognized as responsive to the mission of government; the commitment to excellence by the faculty will not be diluted by responsibilities of service; and the integrity of university governance will be sustained in the interface between the university and government."

Snow job

Probable nor'-east to sou'-west winds, varying to the southard and westard and eastard and points between; high and low barometer, sweeping round from place to place; probable areas of rain, snow, hail, and drought, succeeded or preceded by earthquakes with thunder and lightning.

—Mark Twain

With the possible exception of earthquake and drought, just about all of the above were visited upon our fair city on February 6 and 7, 1978. "The great white hurricane" added another two feet plus of snow, more than compensating for the trivial amount which had melted in the two weeks since a previous two-foot accumulation.

The Medical Area was effectively sealed off, cars were banned from all roads, and public transportation was nil. Harvard University closed down for four days — on February 7 and 8 by gubernatorial order, along with other schools

decor international
171 NEWBURY ST. Boston
262-1529

Handwoven rugs
a very special collection
of Kilims, Tapestries,
Orientals, & related folk art

and businesses in eastern Massachusetts; and on February 9 and 10 by order of President Bok — marking the first official closings anyone here can remember. Readers who may have wondered why the January/February HMAB reached them in March need wonder no longer.

Some devoted workers put on their fisherman's boots or cross country skis to reach hungry animals, waiting experiments, or the payroll (which was met on schedule). Others were stranded here or, like many members of the campus police and Buildings and Grounds staff, put in hours of shoveling and plowing trying to keep the Quadrangle as accessible as possible. Impromptu sleeping and eating arrangements were made.

The camaraderie and eager cooperation that usually occurs only in the face of insuperable natural disaster mitigated the real perils of the storm for many. With major snow removal easing the traffic (at first pedestrian) back into the Medical Area early in the week, HMS opened Monday morning, February 13, having made a little bit of its own history.



Top, summer garden and outdoor café at Children's Hospital is transformed into a garden of snow-mushrooms. Center, note the most remarkable feature of this aerial view of Longwood Avenue — where is all the traffic? Bottom, Shattuck Street slowly disappears in a white haze.

Full steam ahead — but no electricity

Energy conservation and pollution control are urged with about equal frequency by those of us who are environmentally minded. But there is no guarantee that these two objectives will not on occasion conflict. On January 31, the Massachusetts Department of Environmental Quality Engineering (DEQE) ruled against what was designed as an energy-saving feature of the Harvard Medical Area's new power plant, on the grounds that it would produce too much pollution, reversing an earlier proposed ruling which had approved the air quality. In disallowing the inclusion of six electricity-generating diesel engines in the Medical Area Total Energy Plant (MATEP), the Department stated that their nitrogen dioxide emissions would be "potentially injurious to human life and public health" in a densely populated urban area with high proportions of children, elderly and sick people. Within a mile of the power plant site are seven hospitals, five nursing homes (including one seventy feet away), and fifteen public schools.

Protesting the ruling, Harvard vice president for external affairs Edward Lashman charged that the DEQE's ceiling of 200 micrograms per cubic meter for the hourly ambient level of nitrogen oxides in the plant's vicinity is based on "subjectively inferred potential hazards" and "conservative analyses of worst case hypotheses." In October, the DEQE had issued a "proposed ruling" approving the diesels, based on an hourly ambient level of 320-480 micrograms per cubic meter, which MATEP engineers had promised to meet. The agency lowered the ceiling after holding a series of public hearings and receiving testimony from public health officials and medical experts, including faculty members at MIT and the Harvard School of Public Health. Stanley V. Dawson, Sc.D., assistant professor of environmental health engineering at HSPH, explains that their concern stems from the detrimental effects of nitrogen dioxide on the respiratory system and on the body's defenses against

infection, with particularly serious dangers for asthmatic persons. The DEQE, whose role is to implement federal anti-pollution regulations, has been forced to formulate its own yardstick for permissible levels of the gas in the air; the federal government is still in the process of developing a standard, to be promulgated in August 1978. "From what we have read of this work," states Mr. Lashman, "we believe the new plant will have no problem meeting that standard which must take into account, among other concerns, the safety of specially susceptible populations."

Harvard is seeking reversal of the January decision through petitions for an adjudicatory hearing before the DEQE, and also for review in Suffolk County Superior Court. At the same time, Harvard continues to investigate new technologies that may be able to reduce nitrogen oxide emissions.

MATEP is being constructed under the auspices of the Medical Area Service Corporation (MASCO) — which provides non-medical services to the following Harvard-affiliated institutions: the Harvard Medical, Dental and Public Health Schools, the Beth Israel, Children's and New England Deaconess hospitals, the Joslin Diabetes Foundation, the Sidney Farber Cancer Institute, Massachusetts College of Pharmacy, Massachusetts College of Art, the Peter Bent Brigham and Boston Hospital for Women (which will later be served as part of the Affiliated Hospitals Center), and 774 apartments in the Mission Park housing complex. Most of these facilities are currently supplied with steam and chilled water by a seventy year old plant on Blackfan Street. Some critics of MATEP maintain that the old plant could be revamped to provide adequately for the future needs of these institutions, while engineers employed by Harvard contend that this would be impossible.

As originally planned, the new plant was to conserve energy through its "total energy" design. In combining the production of electricity with that of steam and chilled water, the waste from one process could become the energy source for another. Harvard is now proceeding with construction of the steam and chilled water portions, which re-



Above, progress on the power plant construction at Brookline Avenue and Francis Street was photographed in early April. Below, two hundred residents of the surrounding communities demonstrated on December 17 to draw attention to their opposition two days before a DEQE hearing.



ceived DEQE approval on December 20. Work on the plant had begun early in 1977, after an unprecedented DEQE ruling allowed Harvard, at its own financial risk, to excavate the site and lay the foundations while awaiting permission to actually build the plant; construction is now more than one-third complete.

Among the organizations that have appeared before the DEQE to express concern about potential pollution

hazards are the Massachusetts Department of Public Health; the American Lung Association of Massachusetts; Housing Environment Resources for Elders; Action for Boston Community Development; Massachusetts Fair Share, a consumer rights organization; several Mission Hill community groups; and two Brookline environmental protection groups. A number of elected officials also testified against the construction, including State Senator Jack Backman, congressman Robert F. Dri-

nan, representatives Mel King, John Bussinger and James Segel, and several members of the Town of Brookline selectmen's committee.

Another point in dispute is the potential financial savings to be gained from the plant. Mr. Lashman anticipates a yearly reduction of \$1.8 million on projected future energy costs, which could translate into a saving of \$2 to \$3 per day on bed rates at the participating hospitals. The cost of the plant, estimated in 1976 at \$56 million, has risen to \$109 million. In part, the additional costs stem from changes made in the plant's design in response to deficiencies pointed out by experts and community groups at earlier hearings before the Boston Redevelopment Authority. Critics of the plant now express doubt that any savings will be possible with the more expensive design.

MATEP will be exempted from property taxes on its 1.7 acre site (at the corner of Brookline Avenue and Francis Street), but MASCO has agreed to pay \$1.5 million a year in lieu of taxes; previously the site netted the city of Boston

only \$100,000. Opponents of the plant, however, charge that the tax exemption was reaped from a questionable maneuver: after purchasing the town-houses that still occupied the property in the late sixties, they say, Harvard evicted the tenants, tore down the buildings, and was then able to propose the power plant for tax exempt status as a Chapter 121A corporation improving a "blighted, open, and/or decadent area." One community group estimates that at the industrial tax rate paid by utility companies, the MATEP site would owe at least \$7 million a year.

The Total Energy Plant, like the Affiliated Hospitals Center, has traveled a long and rocky road in its relations with the Medical Area's neighboring communities. The Affiliated controversy has achieved a settlement that is, for the most part, agreeable to both the institution and the community. In the struggle over the power plant, however, a mutually satisfactory resolution is not yet a foreseeable outcome.

Bulletin Board

Want to place an ad?

1) The *Alumni Bulletin* is published six times a year. The dates of publication and copy deadlines are: **Jan./Feb. — Jan. 1; Mar./Apr. — March 1; May/June — May 1; July/Aug. — July 1; Sept./Oct. — Sept. 1; Nov./Dec. — Nov. 1.** 2) Per word (single insertion) 10 word minimum, 50¢; Per word 2 times in one contract year, 45¢; Per word 6 times in one contract year, 40¢; 3) Payment for all insertions must be received with the copy. 4) Post Office box number counts as two words. Telephone numbers count as one word. No charge for Zip Code. We are unable to accept HMAB box numbers. 5) Send orders to: Harvard Medical Alumni Bulletin, 25 Shattuck St., Boston, MA 02115

FOR RENT: Chilmark, Martha's Vineyard. Beautiful new 2-story house w/panoramic view of Sound. Complete privacy, near Lucy Vincent Beach, private tennis courts. Dining, family, living rooms, 4 bedrooms, 2 baths, brick fireplace, cathedral ceiling. \$5500 June-Labor Day. (617) 369-2883; 645-9622.

Mistaken identity. In the illustrations for "Sir William Osler's better half" (November/December 1977), the little lady posing with her rocking horse is not Osler's grandniece, Marian Francis (Kelen, M.D.), but rather Lady Osler herself as a child.

AUTHORITATIVE MEDICAL REFERENCES FROM PSG



AMA Drug Evaluations THIRD EDITION

Prepared by the AMA's Department of Drugs in cooperation with the American Society for Clinical Pharmacology and Therapeutics

The new ADE-3 places 1390 pages of essential data at your fingertips. Organized by therapeutic category, chapters begin with a general introduction, followed by individual evaluations for more than 1300 single-entity drugs and compounds (including over 60 new drugs added since the previous edition of ADE). It gives valuable information on indications, adverse reactions, contraindications, and dosage ranges for adults and children. Generic names, trademarks, and preparations are conveniently listed with the name of the manufacturer. The text has been subjected to critical review by hundreds of clinical consultants and by an expert panel of 60 well-recognized authorities appointed by the American Society for Clinical Pharmacology and Therapeutics.

1390 pages, with tables and graphs.

\$29.50*

*available at \$20.00 to AMA members who include AMA I.D. no. and to ASCPT members (please indicate).

Birth Defects and Drugs in Pregnancy

By O.P. Heinonen, D. Slone, and S. Shapiro, Drug Epidemiology Unit, Boston University Medical Center

A large-scale systematic enquiry into the possible teratogenic effects of drugs taken by pregnant women. Based on over 50,000 pregnancies in a study under the auspices of the Collaborative Perinatal Project of the National Institute of Neurological and Communicative Disorders and Stroke, this work analyzes hundreds of drugs in relation to important malformation categories and individual malformations. 528 pages, with appendices. **\$49.50**

Pregnancy Hypertension A Systematic Evaluation of Clinical Diagnostic Criteria

By E.A. Friedman and R.K. Neff, Harvard Medical School and Harvard School of Public Health

A landmark work for obstetric clinicians and researchers, epidemiologists, and public health officials, this important new volume establishes specific criteria for identifying, evaluating, and diagnosing the gravida-at-risk. Based on a nationwide study of over 58,000 pregnancies. 268 pages, with appendices. **\$29.50**

All non-cash orders subject to extra postage and handling charge. Prices subject to change without notice and slightly higher outside the U.S.A.

PSG PUBLISHING COMPANY, INC. P.O. BOX 6 • LITTLETON, MASSACHUSETTS 01460

Teaching the public about teaching hospitals

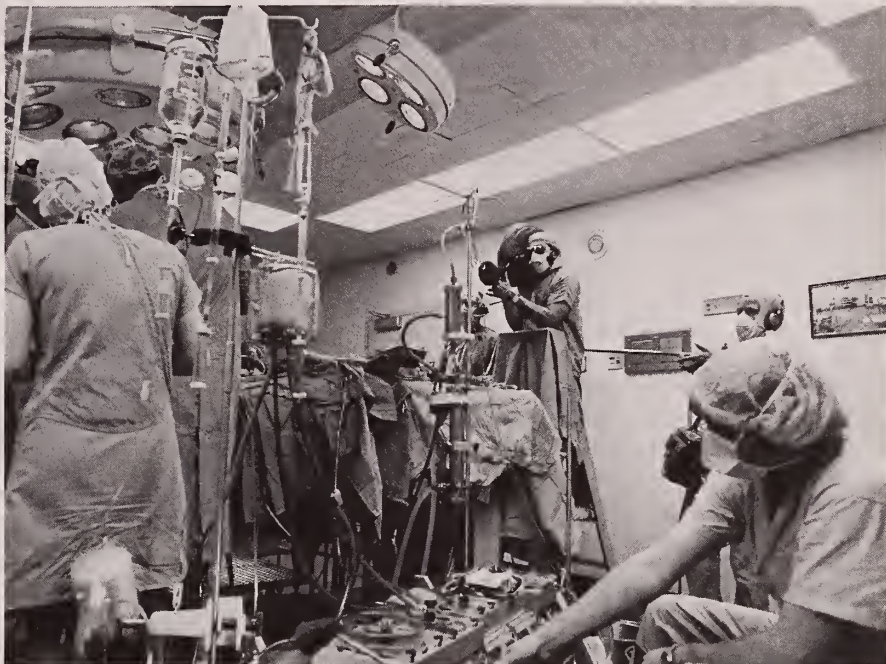
Are patients in teaching hospitals used as guinea pigs for research? Is it risky to be treated by interns and residents? Why does it cost more to be a patient in a teaching hospital than at a community hospital?

It was to answer questions like these that the Massachusetts General Hospital news office and Boston's Channel 5 collaborated to produce *The Teaching Hospital: Learning to Care*, a one hour television documentary in which the MGH is used to tell the story of American teaching hospitals in general.

Life and death crises in the emergency ward, open heart surgery on an eight year old boy, the recovery of a young scientist from Hodgkin's disease — these are the highly dramatic situations used to focus attention on the special resources available at a teaching hospital, and on the ways that the teaching function can strengthen patient care.

Other questions explored are the relationship of basic research to treatment, and the proliferation of highly sophisticated and costly machines and techniques. In one segment, Charles A. Sanders, general director of the MGH, ponders the responsibility that the public eventually will have in deciding which new technologies should be implemented.

The documentary's guiding spirits were G. Timothy Johnson, M.D., medical editor of Channel 5 (who is also editor of the HMS Health Letter), with John B. Mullin as producer and Joan V. Aughton as associate producer, along with Martin Bander, head of the MGH news office. The cast, of course, includes many HMS faculty members as well as an alumnus: Bruce Lytle '71, then chief resident in thoracic surgery; surgeon Mortimer Buckley; pediatric cardiologist Allan Goldblatt; and anesthesiologist Myron B. Laver are involved in the open-heart surgery sequence. Oncologist Rita M. Kelley, biomedical researcher Jerome Gross, and internist Stephen Goldfinger are among those featured in other portions of the film. Boston TV audiences saw *Learning to Care* in February; it will be brought to other cities next fall.



A crew from WCVB-TV records the drama of open heart surgery on an eight year old boy.

Chef's oeuvre

Harvard hash? Veritas *vol-au-vent*? Whether homely fare or haute cuisine, your favorite recipes will be welcome in the Harvard community cookbook, now being concocted in the offices of Harvard Magazine.

Far from being just "another cookbook," this volume will season each recipe with a biographical sketch of the "cook," and a sprinkling of anecdotes — historical, cultural, medical or nutritional — about the dish, garnishing the whole with gastronomical illustrations culled from the museums and libraries of Harvard.

Alumni/ae, faculty, staff and students all are invited to contribute to this galimaufry: recipes may be original or adapted, but must be clear, precise — and Harvarddelicious. Send them to Melanie J. Marcus, Cookbook Editor, c/o Harvard Magazine, Wadsworth House, Harvard University, Cambridge, Massachusetts 02138.

There IS a difference!!!

Our 40th Year

PREPARE FOR:

VQE • ECFMG • FLEX

NAT'L

MEDICAL BOARDS

NAT'L DENTAL BOARDS

NURSING BOARDS

Flexible Programs And Hours

25 Huntington Ave.
Boston, Ma. 02116
(617) 261-5150



COME VISIT OUR CENTER!

Outside NY State ONLY
CALL TOLL FREE

800-221-9840

TEST PREPARATION
SPECIALISTS SINCE 1938

Centers in Major U.S. Cities
and Lugano, Switzerland

SKITS-O-PHRENIA

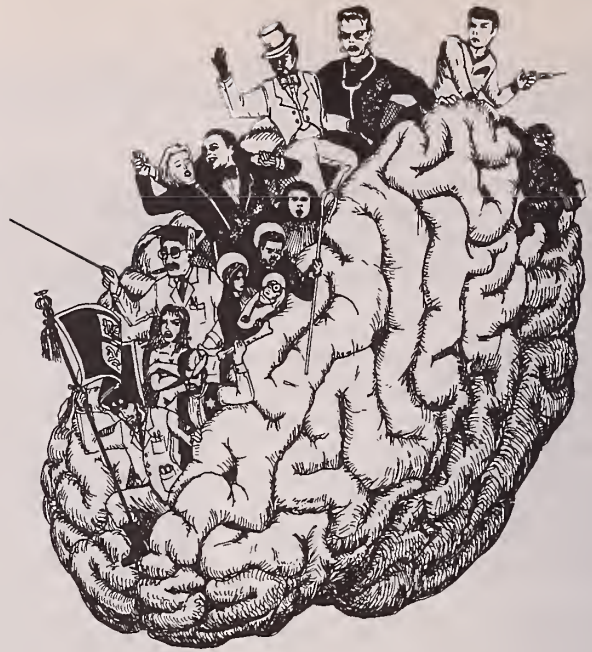
Year in, year out, more predictable than the appearance of Punxsutawney Phil (a.k.a. *Groundhog Day*), each successive class of second year HMSers takes to the stage in early February to wax clever in wild parodies of teachers, courses and themselves, raising medical entendres to new ribald lows. One redeeming fact can be kept in mind — so far no production has been banned in Boston.

Skits-o-phrenia, which was offered to the Harvard Medical community by the Class of 1980 freely pirated stage, screen and soap opera to regale its audience with vignettes like the Bone Ranger and his deputy Fester versus

the Syphilis Boys, and songs like "Come to the Count-a-way" and "Urea, Urea, I'll Never Stop Making Urea."

Upholding the bawdiest standards is an honorable tradition with which many alumni/ae can identify, having done the

same as students. According to local anthropologists, these youthful follies are a *rite de passage* that precedes the onset of maturity and a highly professional demeanor. There is no permanent damage.



Medicine at Harvard

The First Three Hundred Years
Henry K. Beecher, M.D. and Mark D. Altschule, M.D.



Since 1782 Harvard Medical School has been associated with most of the world's developments in medicine, often either as creator or challenger. This is a generously documented, illustrated account and assessment of Harvard's contribution to medical education and to medical practice. There are no chronologies of names, dates, and discoveries; instead the authors describe the Harvard past so as to reveal the trends leading to significant developments, and to define the ideas that made them possible. The emphasis is upon both the men themselves—in the classroom, in the laboratory, in the hospital—and the medicine they made. "Demonstrating impressive mastery of sources, both manuscript and published, and rare sensitivity to the major issues in the history of medical education, Beecher and Altschule have produced the most valuable work on the subject to date."—*Choice*. \$27.50

University Press of New England
Box 979, Hanover, New Hampshire 03755

ORDER FORM

Please send me _____ copy/ies of *Medicine at Harvard* @ \$27.50. I enclose \$ _____ (10% discount to teachers; all foreign orders and orders from individuals must be prepaid).

Name _____

Address _____

_____ Zip _____



University Press of New England
Box 979
Hanover, New Hampshire

THIS BOOKLET COULD CHANGE YOUR ENTIRE APPROACH TO MEDICINE



**Send for it now with the coupon
below and discover how you
can practice MEDICINE...**

- with more time for pure medicine; a minimum of administrative paperwork
- with professional liability protection at no cost to you
- with much more time for yourself and your family
- with more opportunity to practice the specialty of your choice
- with more opportunity for advanced training
- with top-grade facilities and equipment
- with outstanding research opportunities
- with a varied range of diseases to treat
- with substantial income and fringe benefits
- with a touch of travel and adventure
- • • and more

For faster response telephone 223-6216

**MEDICAL OFFICER PROGRAM
CodeMO4, NAVY RECRUITING
575 Technology Square
Cambridge, MA 02139**

Name _____
Address _____
City _____ State _____ Zip _____
Telephone No. _____

My senior year of college had scarcely started when the first letter arrived inviting me to be interviewed for medical school. September passed and when October ended, four letters, four trips and many miles later, I had already begun to feel the perennial weariness that besets the traveling salesman. Soon the time came to make a fifth excursion, but the prospect of packing up an almost contemptuously familiar repertoire of belongings again was hardly inviting, since I didn't expect my next visit to be anything but mundane.

The day arrived. Breakfast, a train ride, an orientation meeting, then lunch, a round of handshakes with first year students and the canonical interview and I was almost ready to return home. Only the tour remained. A fourth year student escorted a few of us around the hospital complex, taking us to see the empty amphitheatres, politely pay our respects to the historical illustrations in the library, and stare at the construction plans for a new concrete superstructure.

We wandered through a maze of wards and corridors, trekked up staircases and in and out of labs. The elevator stopped on the tenth floor of a tall modern building, and we followed the guide down the main hall, waiting as he unlocked a small, unmarked door.

The room that surrounded us was dimly lit; it took me some seconds to realize that we were inside a surgical amphitheater. As we approached the dome the guide informed us that the patient below was undergoing open heart surgery.

Leaning over, I found myself in vividly close contact with the operating room. In clear view, a team of surgeons worked quickly and deftly over an extended form. Bright fluorescent lamps bathed the room with an intense white light. The metallic instruments, the wire-meshed floor and the surgeons' glasses all gleamed coldly and brilliantly, giving the room a rarefied and otherworldly aspect.

Transfixed, I scrutinized the form on the table. The face was completely concealed by cloths. The limbs were extended in a posture of absolute passivity. The skin that could be seen was painted a wan yellow-brown color, which glowed eerily under the operating lamp. The flesh looked flaccid and somehow unreal. In the center of my field of view was the open chest. The ribs had been pulled aside to reveal the ooze of organs within. The gleaming opalescence took me by surprise, for it immediately suggested the sight of an opened chicken's breast.

My eyes were unavoidably drawn to their final focus — a congested knot of red, swelling powerfully, rising tremulously, then sinking back to the indistinguishable mass of membranes beneath it — the heart. More magnetic than a blazing fire was the sight of this heart, beating slowly and insistently, with unrelenting power. The beats were transubstantiated into rhythmic bursts of sound whose electronic tones carried upwards.

The five of us stood silently in our suits and ties, muted by the challenge that issued from the world below — separated from us by only ten feet and a thin plastic veil. There lay a man unknown to us by name or history; no face to behold, nary a movement to follow and no sound to hear, save for the electronic medley of the human heart. Personality and individuality anesthetized away, there was only the bare biological self before us — the underlying reality of us all — stripped of wakeful attributes, relieved of any social and cultural meanings. Our world above seemed suddenly dwarfed — a world in which we are mere abstractions of our bodies: a face, a set of mannerisms, a collection of habits. A world in which we are known to ourselves and to each other by voices and thoughts and gestures.

The operating room

by
Steve Hoffmann

Steve Hoffmann is a first year student and member of the editorial board of the Alumni Bulletin.



There was terrible meaning in those moments. The five of us were frozen into a stare within ourselves, suddenly confronted with our biological essence. It was as if we were glimpsing, in operation, the principle of life itself. Up and down went the heart, keeping life's time as it pounded out the rhythm of the long millenia of beings from empty primordial seas to an aged planet teeming with life.

Abruptly the door opened and we were led from the room. Taking no more than ten steps down the hall we suddenly found ourselves in front of a large picture window. It was a clear fall day and the entire city was laid out before us, glorious beneath the achingly blue sky of the afternoon. Old and dusty it looked, this city, with its countless concrete, brick and wooden monuments silhouetted by the sky. What it was they embodied I could only wonder at, but the answer, I knew, was rooted in the beating heart just footsteps down the hall.

Facing the window, I realized that biological being and the civilized mind, one the gift of nature and the other culture's great artifice, had come full circle in the operating room. Some of the most complex technology invented by our civilized side was being applied to benefit the realm of the biological.

Turning to leave, I stopped short — impelled to remain. Interposed between the expansive city and the tight microcosm of a single being reduced to only a heartbeat, I stood in a privileged and ordained spot. I felt, as I had never felt before and will never again feel, what it is to be a human being.



PANORAMIC VIEW OF THE EXCAVATIONS AT MOUNT MICA

Elijah and Ezekiel on Mount Mica

by George E. Gifford, Jr.

Elijah and Ezekiel stood atop Mount Mica. This was not the Elijah the prophet of Tishbeh who brought a three year drought upon Israel and was miraculously fed by ravens and later by a widow of Zarephath, whose son he raised from the dead. This was not the Elijah who, with a blow of his folded mantle, divided the waters of Jordan, or the Elijah who saw chariots and horses of fire, and who was snatched by a whirlwind to heaven. Neither was this Ezekiel the prophet who saw the moving throne, the valley full of bones, the great temple of the future, and the wheel.

The Elijah and Ezekiel were Elijah L. Hamlin, born in 1800 and Ezekiel Holmes, born in 1801.^{1,2} In the dusky glow of late afternoon, "a vivid gleam of green flashed from an object on the roots of a tree" and Elijah found a "glistering gem," which was later identified as the gemstone, tourmaline.³

The Bulletin's historical scribe, George E. Gifford, Jr., M.D., transports us to the repository of Mt. Mica in Maine, where tourmalines were fortuitously discovered 158 years ago.

The time was late fall, 1820, at Paris Hill, Maine, and the adventuresome young men were college students at Brown University. After the first find, it quickly became too dark to look for more gems, and a snowstorm kept the two prospectors from further exploration the next day. They returned to school.

Elijah Hamlin was the son of Dr. Cyrus Hamlin, a physician in Paris Hill, Maine, who had attended the lectures at the Harvard Medical School. Elijah later read law with Governor Enoch Lincoln and became a lawyer. Ezekiel Holmes graduated from Bowdoin Medical School in 1824 and studied medicine also in Paris Hill with his uncle, Dr. Benjamin Chandler.

In the spring of 1821, Elijah and Ezekiel came back to Paris Hill and retraced their earlier path up Mt. Mica. There they found "thirty or more crystals" — sparkling green, blue, yellow and white — around the eroded ledge that produced the first gems. Unable to identify the stones, they sent samples to Professor Benjamin Silliman, who was the expert in mineralogical matters at Yale.⁴ He advised them that their discovery

was the rare mineral, tourmaline. Indeed, the pair "had stumbled upon one of the richest and rarest of nature's laboratories."⁵

A complex silicate usually black in color, tourmaline is sometimes found in exquisite variations of blue, red, green, clear and brown, and some crystals show striking bands of different colors. The name is from the Cingalese *tour-mali* — the brown gemstones discovered in Ceylon early in the eighteenth century.⁶ Many of the crystals recovered from Maine are known as "watermelon" tourmalines, having a rim of green surrounding a pink center.

Among the Hamlins, a familial interest in these stones soon developed. In 1822, Elijah's younger brothers Cyrus,⁷ who also was to attend the Harvard Medical lectures, and Hannibal,⁸ who was to become vice-president under Abraham Lincoln, did further exploratory work in the cavity where the tourmalines had been unearthed. Hannibal was only casually interested in minerals and relinquished his share to Cyrus. Cyrus moved to Calais, Maine to practice medicine, and through correspondence with mineral collectors over

the world sold or exchanged the majority of his fine pieces. He kept no records of these transactions and the knowledge of the ultimate destinations of the gems died with him; however, it is known that specimens were sent to Professor Cleaveland of Bowdoin, whose own papers indicate that many of the original tourmalines may be among the Swedish Crown Jewels. Other Mt. Mica tourmalines found their way to the Imperial Collection at Vienna.⁹

Not without a certain predisposition did Elijah's son, Dr. Augustus Choate Hamlin, follow the paths of medicine and mineralogy. Augustus wrote *The Tourmaline* in 1873, which has become a rare book; and he delved further into the nature of these stones in *The History of Mount Mica of Maine USA and Its Wonderful Deposit of Matchless Tourmalines* (1895).¹⁰ With his son, Fred Cutting Hamlin, he made extensive explorations beyond those undertaken by his father. The collection of Mount Mica gemstones that eventually found its way to Harvard's Mineralogical Museum was described and catalogued by both Hamlins. The majestic Hamlin necklace presumably was fashioned by the senior Hamlin; its multi-tourmaline clusters resemble designs that he created for several other pendants.¹¹

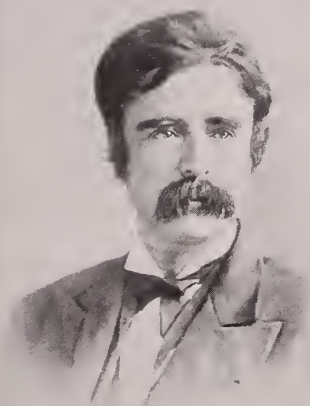
Mineralogy was a developing science in America two hundred years ago, growing out of the study of chemistry. In the late eighteenth to middle nineteenth centuries, departments of chemistry in medical schools were the nidus for the emerging discipline of geology.¹² The first three incumbents of the Professorship of Chemistry at Harvard were, in fact, physicians: Aaron Dexter, John Gorham, and John White Webster.¹³ Two of Dexter's students made significant contributions to American geology. Lyman Spaulding, who received his M.D. degree from Harvard Medical School in 1797, authored "Origins of Meteorites" in 1808 for the American Philosophical Society; he later taught chemistry and materia medica at Dartmouth.¹⁴ Parker Cleaveland, Professor of Chemistry and Mathematics at Bowdoin, wrote the *Elementary Treatise on Geology and Mineralogy*, the first comprehensive text, which was published in 1816 and 1822.¹⁵

Cleaveland also came under the pedagogical influence of Benjamin Waterhouse, the Hersey Professor of Physic, who had been giving a course on natural history annually at the college since 1788. Cleaveland was less than complimentary toward his teacher Waterhouse and his four lectures on geology and mineralogy, which were duly illustrated by specimens: he stated that he did not know that there was more than one kind of rock in the world when he graduated from Harvard.

In the next generation of Harvard faculty, Dr. Charles T. Jackson followed his mineralogical interests more scientifically. Perhaps best remembered for his claim as the discoverer of ether,¹⁶ he pioneered in the field of analytical chemistry and later became the state geologist for Maine, Rhode Island, and Nova Scotia.

Elsewhere in New England physicians were taking up geological studies in earnest. Dr. Archibald Bruce, Professor of Materia Medica and Mineralogy at the College of Physicians and Surgeons (precursor to Columbia University), described zincite, and today is remembered by the eponymous mineral, bruceite.¹⁷ In 1810 he founded and became editor of the *American Mineralogical Journal*. Dr. Samuel Robinson of Providence, Rhode Island established the American Mineralogical Society (1819-1826) and wrote the *Catalogue of Minerals and Their Localities*; indeed it may have been he who sparked the interest of both Ezekiel Holmes and Elijah Hamlin in geology when they were students at Brown.¹⁸

The career of Dr. John White Webster, who practiced medicine in Cambridge and taught at Harvard Medical School, becoming the Erving Professor of Chemistry and Mineralogy, exemplified the amalgamation of medicine, chemistry, and geology. An indication of his geological interest was the publication of *Description of the Island of St. Michael Comprising an Account of Its Geological Structure With Remarks on the Other Azores or Western Isles* in 1821.



Augustus Choate Hamlin: his artistry accentuated the radiance of the rough tourmalines.



Two years later Webster learned of the Maine lode. He wrote to Elijah Hamlin expressing his desire to visit Paris Hill and told Elijah that he would credit him with the discovery in the seminal issue of the *Boston Journal of Philosophy and the Arts*.¹⁹ He did journey to the celebrated site and it has been recorded that "Dr. Webster was so transported by his harvest that he skipped and danced in ecstasy on the rocky slope of Mt. Mica, a vivid memory to his guide."²⁰ His chemical and geological contributions have been eclipsed by the fact that he murdered George Parkman in 1848. Strangely enough, this episode had its own mineralogical overtones:

It appeared that Dr. Parkman, who for a long time had held a mortgage on Webster's mineralogical collection as security for a series of loans, discovered that Webster had sold the minerals to 'Robert Gould Shaw,' a relative of Parkman; incensed by such dishonesty, he insisted on the payment of the mortgage. Webster, who lived very extravagantly, did not have the money and had exhausted his credit. He lured Parkman to his laboratory-lecture room at the Harvard Medical School where parts of the victim's body were found several days after his unaccountable disappearance.²¹

Most likely, some of the Mount Mica tourmalines were in Webster's mortgaged mineral collection.

Ezekiel Holmes himself, after being educated as a physician, turned instead to geology. Nine years after receiving his M.D. degree from Bowdoin in 1824, he was appointed the first teacher of geology at Colby College in Maine. Some thirty years later, under state authority, he conducted an extensive survey of the natural resources of Maine.

Paris Hill, Maine remains a beautiful and rather quiet town, but the top of Mt. Mica is scarred by over a century and a half of burrowing, digging, and blasting for gemstones — particularly tourmalines. Many of these have been squirreled away as heirloom jewels, some are in museums, and the Hamlin necklace lies in splendor at Harvard.

The story of the Mount Mica gemstones that begins with the Hamlins, continues. Unquestionably the state of Maine has yielded the most abundant cache of tourmalines in North America. Although the "strike" in the early nineteenth century has been surpassed by more recently discovered deposits, the first de-



This is a fragment of a rare and exceedingly beautiful and flawless green tourmaline. Weighing 411 carats, it broke during natural physical-chemical disturbances following the period of crystallization in the Mt. Mica Pegmatite. Its present ownership is unknown.

Now in the Mineralogical Museum, this specimen was mined at Mt. Mica on June 25, 1904 — weight 31½ pounds and height nearly 17½ inches. The core at the base is a dark, dull red while the tips are a pleasing light green. The crystal is in two parts, having been separated along an ancient fracture in the mineral formation.

scription of these extraordinary natural phenomena still impresses:

*It is interesting . . . to conjecture how nature constructed the marvelous stones in the very heart of the granite rocks; how she silently built up in the darkness of the miniature caverns, or in the very substance of the granite itself, the transparent atoms of their crystal forms; how she touched them with fiery red, the lively green, the mellow yellow, the somber black or the tender blue; how, at times, she separated these hues in the same crystal as if by magic touch, or blended them together in exquisite transition and gradation.*²²

Acknowledgments

I would like to thank Dr. Hannibal Hamlin, chief of the neurosurgical clinic at the Massachusetts General Hospital and great-grandson of Elijah Hamlin's brother, Hannibal, for family information; Dr. Adam Moore for references to tourmaline; emeritus professors at Harvard Clifford Frondel for his helpful suggestions and C. S. Hurlbut for the cover illustration of the Hamlin necklace; and emeritus professor of geology B. M. Shaub of Smith College for the illustrations of tourmaline.

References

1. Augustus Choate Hamlin, *The History of Mount Mica* (Bangor: privately published), 1895.
2. Charles Eugene Hamlin, *The Life and Times of Hannibal Hamlin* (Cambridge: Riverside Press), 1899.
3. Dumas Malone, editor, *Dictionary of American Biography*, Vol. IX (New York: Charles Scribner's Sons), 1932, pp. 163-164.
4. Jeanette Graustein, *Thomas Nuttall, Naturalist* (Cambridge: Harvard University Press), 1964, pp. 211-212, 214, 349-350.
5. Hamlin, *The History of Mount Mica*, p. 9.
6. Edson S. Bastin, *Geology of the Pegmatites and Associated Rocks of Maine* (Washington, D.C.: U.S. Geological Survey Bulletin 445), 1911.
7. Paul E. Desautells, *The Gem Kingdom* (New York: Random House), 1970, pp. 160-161.
8. Oliver Cummings Farrington, *Gems and Gem Minerals* (Chicago: A. W. Mumford), 1903, pp. 111-116.
9. Frederic Brewster Loomis, *Field Book of Common Rocks and Minerals* (New York: G. P. Putnam's Sons), 1948, pp. 135-137.
10. Stevens, "Striking it Rich with Maine Tourmaline," *Down East*, vol. 19, no. 8, May 1973, pp. 42-45, 74.
11. Michael Weinstein, *The World of Jewel Stones* (New York: Sheraton), 1958, pp. 115-117.
12. Herbert T. Whitlock, *The Story of Gems* (New York: Lee Furman), 1936, pp. 113-116.
13. Mab Wilson, "Tourmaline," *Gems* (New York: Viking Press), 1967, pp. 154-156.
14. Letter from Dr. Hannibal Hamlin, May 2, 1973.
15. Hamlin, *Life and Times*.
16. Stevens, *Gems and Minerals*, p. 113.
17. Hamlin, *The Tourmaline* (Boston: James R. Osgood), 1873.
18. J. B. Hadley, "Tourmaline, Ruby, Beryl, Topaz," *Harvard Medical Alumni Bulletin*, December 7, 1934, p. 325.
19. Stevens, *Gems and Minerals*, pp. 205-206.
20. George H. Daniels, *American Science in the Age of Jackson* (New York: Columbia University Press), 1968, pp. 10-12, 22, 23, 29, 30, 38-39, 91, 134, 138, 142, 159-162, 185-186, 204-205, 221, 235.
21. G. P. Merrill, *The First One Hundred Years of American Geology* (New Haven: Yale University Press), 1924.
22. D. J. Struik, *Yankee Science in the Making* (Boston: Little Brown), 1948, p. 213.
23. Idem, "American Science Between 1780 and 1830," *Science*, vol. 129, no. 3356, April 24, 1959, pp. 1100-1106.
24. William J. Youmans, *Pioneer of Science in America* (New York: Appleton), 1896.
25. Henry K. Beecher and Mark D. Altschule, *Medicine at Harvard* (Hanover, New Hampshire: University Press of New England), 1977, pp. 47-50.
26. The handwritten original of this paper is at the Francis A. Countway Library of Medicine.
27. John G. Burke, "Parker Cleveland," *Dictionary of American Biography*, Vol. 3, p. 313.
28. George E. Gifford, Jr., M.D., "Charles T. Jackson, M.D." *Dictionary of Scientific Review*, Vol. III, 1973, pp. 44-46.
29. Graustein, *Thomas Nuttall, Naturalist*, p. 164.
30. *Ibid.*, pp. 216-217.
31. Hamlin, *The History of Mount Mica*, p. 18.
32. John White Webster, co-editor, "New American Locality of Rubellite and Lepidolite," *Boston Journal of Philosophy and the Arts*, vol. I. May, 1823, pp. 190-191.
33. Graustein, *Thomas Nuttall, Naturalist*, p. 214.
34. *Ibid.*, p. 388.
35. Hamlin, *The History of Mount Mica*, pp. 56-57.

Health care in the new China

by Gilbert S. Omenn

One fourth of all the people in the world live in the People's Republic of China. Their government has taken full responsibility for medical care as well as many other aspects of their lives. Thus, for every visitor to "New China" it is fascinating to observe how medicine is woven into the fabric of the society.

I spent twenty-one days in China, from November 17 to December 7, 1976. Besides my natural curiosity about the social system of rural and urban China, I was especially eager to observe health care services and organization, higher education and the far-reaching effects of the new leadership's attack on the so-called Gang of Four, which includes Chairman Mao's wife, Chiang Ching.

I traveled in a group of twenty-four, organized by a left-wing newspaper in New York City, *The Guardian*. A more heterogeneous group than ours would be hard to imagine; we ranged from Marxists to employees of the United States Office of Education and the legal department at IBM. Our itinerary included visits to six cities: Kwangchow (Canton); Hangchow, a beautiful city of ancient China; Shanghai, the most populous city in the world; Tsingtao, the seaport of Shantung Province, and Tsinan, its capital; and Peking, the capital

Gilbert S. Omenn '65 is an assistant director for human resources and social and economic services of the President's Office of Science and Technology Policy, where his responsibilities encompass biomedical, health services, environmental, nutritional, international, and socioeconomic matters in science and technology. Before coming to Washington, D.C., he was associate professor of medicine (medical genetics) at the University of Washington, Seattle. He also directed the Robert Wood Johnson Clinical Scholars Program there, developing training experiences for physicians in research concerning health care delivery issues, including technology assessment, emergency care, bio-ethics, and many aspects of primary care.

of China. During the trip, I switched groups and spent a day with a delegation organized by the United States/China People's Friendship Association, consisting of health workers from the southeastern United States.

We were in China at a historic juncture. Chairman Mao, the only leader the People's Republic of China had known and one of the founders of the Chinese Communist Party in 1921, had died only two months earlier, on September 9. Earthquakes had caused terrible damage in the region just northeast of Peking during the summer, and more were feared. Mao's successors had named his apparent personal choice, Hua Kuo-feng, chairman of the Central Committee and its Military Commission. But throughout the world, there was skepticism about the ability of this relatively unknown figure to take control. Simultaneously, an increasingly hateful campaign was begun against Chiang Ching and her three well-known and greatly feared compatriots on the Central Committee. There was a crescendo of denunciations against the Gang of Four, and everywhere we went — kindergartens, clinics, factories, rural communes, university groups — we were told that the people "are jubilant about the smashing of the anti-party clique of the Gang of Four." Buildings everywhere were plastered with their caricatures. In Kwangchow, a floral design in the Memorial Gardens spelled out in giant characters, "Down with the Gang of Four" and "We support from the bottom of our hearts Chairman Hua." Now, more than a year later, the new regime is well established. However, the spectre of the detested clique has not been eliminated; in certain parts of China their supporters have apparently caused considerable disruption and opposition. The four former leaders are thought to be under house arrest.



In the twenty-seven years since the establishment of the People's Republic and especially since the Cultural Revolution, medical care in China has changed dramatically. Medical services have been woven into the society, with clinics in factories, neighborhoods and rural villages. These clinics, with their "barefoot doctors," or physicians' assistants, form one level of a five-tiered network of medical services.

At Shan Wang Production Brigade, we visited a clinic serving the 782 men, women and children of that rural collective. Two barefoot doctors, a man of about thirty and a woman in her mid-twenties, work there, usually one in the clinic and the other circulating through the workers' housing and the rice and tea fields, tending to minor medical problems. Each of the eleven production brigades of the Hangshon Commune (20,000 people) has such a clinic, with one or two barefoot doctors. There is also a hospital for the entire commune. For more complicated medical problems patients are taken to the county hospital, where the barefoot doctors receive their six months' training.

Beyond these three levels of care are a provincial hospital and then a teaching hospital affiliated with a medical school. The cities have a parallel multi-tiered system, with clinics for neighborhoods of 600 to 1,200 people, and a hospital for each community of 30,000 to 50,000. Nearby factories have their own clinics and day-care services, which serve as a focus for public health activities. District hospitals in each city may in turn refer complicated problems to the provincial and teaching hospitals.

I talked with the chief of surgery at the Shantung Provincial Hospital in Tsinan, who had recently returned from four months in the countryside. He had worked primarily in the county hospital, training barefoot doctors and assisting surgeons, and had toured the communes to learn more about the life, hazards and medical needs of the rural people. The Chinese and, perhaps even more so, my American colleagues were impressed to learn that we do something of the same in Seattle. I was able to tell them that exactly two weeks later I would be sent to do medical consulting work in Montana under the auspices of the University of Washington Teaching Hospital (as part of the Washington, Alaska, Montana and Idaho

"The present government is moving rapidly to reestablish high academic standards and downgrade the political content of the curricula."



Posters denouncing the Gang of Four:

At far left, they are caricatured as the "four pests" (fly, rat, mosquito, bedbug) against which a massive and successful public health campaign was waged under Mao's leadership.

At left, the clique is shown wallowing in self-indulgence — Chiang Ching with self-anointed crown, evening gown, camera, cigarette and general immodesty; her compatriots in excesses of eating and drinking — in a picture, the "bourgeois capitalist-roaders".

Even apart from ideology, it is not surprising that images of overindulgence are a potent weapon of political satire in a country where affluence for all is not yet a possibility.

“Barefoot doctors seem to have good judgment about when to refer patients to physicians and when to treat them directly.”

medical program). The Chinese were unaware of Montana, so I likened it to Hunan Province, which brought respectful murmurs, since that rural province of China was the birthplace of both Chairman Mao and now Chairman Hua.

Planning for medical services comes under the State Planning Commission, but many decisions are left to provincial and local levels of government and party. In the city, all medical services are free. In the rural areas, there is a cooperative network that takes equal payment from the individual, the production brigade and the commune, amounting to half a yuan each per year — twenty-eight cents.

The training of doctors takes place in medical colleges, while nurses, technicians and laboratory workers attend what are called medical schools. At the time of my visit, admission to medical college, or to higher education of any sort, required four steps. After secondary school (universal in the cities), at age eighteen, young people would first go to work in factories or rural communes for two or three years. The relatively few applicants for higher education then needed the recommendations of their co-workers, based upon political, moral, and intellectual characteristics and the approval of the leadership at their place of work. Finally, the college or institute

would select applicants for a limited number of positions from the usually much larger group that had been recommended and approved.

Unlike many American commentators who often over-emphasize the requirement for political correctness in admission to higher education, I believe that the Chinese have a highly developed sense of meritocracy. Since the incomes for college graduates and for physicians are not higher and the social status probably not greater than for agricultural or industrial workers, there is every reason to seek out and recommend young people with special academic or creative talents for appropriate opportunities. A politically non-conforming young person, of course, might find the going difficult.

During the Cultural Revolution of the late 1960s, all universities and most schools were closed for two to four years. When they reopened, curricula were drastically shortened, with academic content shrinking as political education increased. Medical colleges were cut from six to three years. One of the most important implications of the “smashing of the Gang of Four” is the return of greater academic rigor and longer courses of study. An entrance examination has now been made an important determinant of medical school admission. Potential physicians



are required to enroll for five years, take a substantial amount of basic science, and serve an internship. Moreover, students can go directly from secondary school to medical college at present, without an interlude of agricultural or factory work. Reports indicate that the present government is moving rapidly to reestablish high academic standards and downgrade the political content of the curricula and the political orientation of the faculties.

Upon completion of the medical college course, graduates are sent to work in hospitals or clinics serving rural or urban populations. The emphasis is clearly upon primary care. Some are selected for specialty training, based again upon their interest, demonstrated abilities, and recommendations. Guides and surgeons alike laughed at the possibility that a surgeon would be selected more for political correctness than for surgical skills.

The priorities of China's medical system are clearly stated: put prevention first in health work; serve the workers and peasants and stress the rural areas; support the mass movement, integrating health work with political activities; and unite traditional Chinese and Western medicine, especially in the area of herbal and modern drugs. Yet based upon Chairman Mao's dictum that "opposites should co-exist" and "we must walk on two legs," some investment has been put into kidney dialysis machines, lasers for ophthalmological work, and even coronary artery bypass surgery at selected institutions.

A Harvard delegation.

A more recent visit to the People's Republic was made by the Harvard Primary Care Delegation this winter. David Calkins '74 organized a group including his classmates Patience White, Albert Mulley and Jonathan Silver, and twenty other physicians, students, nurses, nutritionists and social workers from the Massachusetts General, Cambridge, Beth Israel and Peter Bent Brigham hospitals. Their two week trip was arranged with the help of Robert Lawrence '64, director of the HMS Division of Primary Care, and the Boston office of the US-China People's Friendship Association.

The delegation became the first US group to visit Taiyuan, capital of Shansi Province — a city the size of Boston, in which both industry and agriculture are brought together in an urban setting.

The group was impressed by the equality of men and women in the health professions. Women form the majority of health care administrators and physicians, as well as of the less highly trained rural "barefoot doctors" and urban "worker-doctors."

What about the overall health of the Chinese? "The major causes of morbidity and mortality are the same as in the West," according to Dr. Calkins — "heart disease and cancer. Although the Chinese diet has much lower animal fat consumption than Western diets, the lowered risk this might confer for cardiovascular disease is offset by the very high concentrations of salt used in foods, and the almost universal habit of cigarette smoking among adult Chinese males. For women, the smoking is not as pervasive."

The Harvard delegation's observations confirm the reports of changes in medical education and scholarship noted by Dr. Omenn. The apparent trend toward a more Western approach includes the resurgence of professional journals, the scheduling of conferences, and expanded opportunities for basic research.



(Left) At Shumchun Railway Station, entry point to the People's Republic of China from Hong Kong, all signs are written in both English and Chinese.

(Right) I met the two barefoot doctors at the clinic of the Shan Wang Production Brigade, which is part of the Hangshon Commune, located to the west of Hangchow.



(Above) The pharmacist at Liu Fu Commune posed beside his ample stores of both Western and traditional herbal medicines.

(Right) Temporary shelters were set up in the streets of Tsingtao as a precaution against further earthquakes; at the time of our visit the major streets were lined with shelters fashioned from a miscellany of materials.

(Top right) I watched a forty-two year old man undergo a mitral commissurotomy with acupuncture anesthesia. As his chest wall was being closed at the end of the surgery and his oxygen mask was removed, I waved to him from my seat in the amphitheatre. He gave me a broad smile, and I photographed the event.

The spartan clinics and hospitals reminded me of some of our older county hospitals. Chinese facilities are generally poorly lit and unheated, with equipment at least twenty years older than one would expect to find in the United States. The operating room floors we saw were uncleaned — as were bathroom floors in the best hotels. But there were adequate resources for anesthesia, surgery, outpatient care and the common problems of internal medicine.

We saw no mental health institutions, and our guides regularly reassured us that mental illness is nonexistent in China. However, I was able to learn that every large city has a mental hospital and some teaching hospitals have a psychiatric section. Most likely these patients are afflicted with schizophrenia and depression and other serious psychoses that are believed to have a biological and genetic base, regardless of politics or social environment.

Pharmacies, even in the rural commune hospitals, are extremely well stocked. All of the Western drugs, which carry both English and Chinese labels, are made in China. There are also large inventories of packaged herbal medicines. From what I was told and observed, I have little doubt that the Chinese greatly overprescribe medicines of both types.

Acupuncture has two uses — for anesthesia and for treatment of a variety of chronic complaints. Acupuncture for anesthesia has been developed in the past two decades. Most hospitals perform only ten to twenty per cent of surgery with acupuncture anesthesia, even though its safety and effectiveness seem so impressive. Anesthesiologists told me that they exclude any patient who is reluctant, apprehensive or nervous and all patients undergoing major abdominal surgery or surgery requiring more than three hours. I watched six operations that used acupuncture, including removal of ovarian cysts, thyroid tumor, brain tumor and cataract. Acupuncture for treatments is another matter, with a history of more than 2,000 years in China. Physicians with whom I talked were quite frank in stating that chronic medical problems usually required chronic treatments and even these were not effective on all patients.

There is growing suspicion that China may not have the 800 million people long attributed to her. The growth of the population, for which accurate figures do not exist, has been restrained, in large part because of family planning based upon late marriage, voluntary sterilization, and contraceptives (condoms, IUD's, and "the pill"). Older





“Guides and surgeons alike laughed at the possibility that a surgeon would be selected more for political correctness than for surgical skills.”

people with four grown children regularly pointed out that nowadays they would not have had so many children, even in rural settings. Although they insist that premarital sex does not occur, the people I spoke with did acknowledge that a pregnant unmarried woman can obtain an abortion and that condoms can be purchased without proof of marriage.

Just as we in the medical profession struggle to define and assess quality of care in the United States, I found it difficult to draw any reliable conclusions regarding medical practice in China. As far as I observed, surgical skills are excellent. Among the physicians with whom I could converse in English, I perceived sound knowledge about complex medical problems. Barefoot doctors seem to have good judgment about when to refer patients to physicians and when to treat them directly.

Public health and sanitation measures have been highly effective — the “four pests,” flies, mosquitos, rats and bedbugs have been virtually eliminated — and public education about health promoting activities seems widespread. Travelers only rarely develop diarrheal illness, though respiratory complaints are very common, due to air pollution and low humidity. The Chinese readily admit that theirs is still a developing country and that they are still overcoming past deficiencies in health services for their huge population. Nonetheless, it is clear that they are emphasizing health care and medical advances as they move toward Chou En-Lai’s stated objective of making China a major industrialized socialist state over the next few decades. All in all, the developments in health care are among the accomplishments of which the Chinese are most proud.

MUSINGS

photograph by
Daniel A. Goodenough
assistant professor of anatomy



Midsummer

*Moonlight fills the cup
of this quivering nocturnal world . . .
Shimmering iridescence
on rainsoaked aspen leaves
overwhelming Nature's senses
with soft ethereal splendor
as the deep lake stillness
and living night-clad hills
dance within the silver glow of Peace
in the aftermath of
Thunder's rage . . .
Clouds filtering aimlessly
drifting into nothingness
before that source of Awe . . .*

*Drink deeply of the cup
for strength of soul
for tranquility, inspiration
whenever you seek awareness
or simply unification of being
with the inner mystery of life.
The call of the loon
and the cry of the babe
are One and the Same.*

Imagination

*Imagination is the light of day
shining into desperate moments,
bringing life to deathly stillness . . .*

*Capture the wings of a dream,
soaring into the colorful
realm of the impossible . . .*

*To overcome fear, don't hesitate
but plunge into the darkness
armed with a golden heart.*

*It's only by stretching the mind
that new ideas will grow.
The glory of truth is discovery.*

— Mary E. Sunday '80

From Townsend Street to Brookline Avenue

by Arthur J. Linenthal

At the turn of the century, the population of Boston was swelled by a steady stream of poor Jewish immigrants. Many sick Jewish people refused to go to the existing hospitals because they knew the food would not be kosher, and they were concerned about the proper observance of the Sabbath and of the rituals at death. Furthermore, they needed care from sympathetic doctors and nurses who spoke their languages.

Starting in about 1911, a dedicated group of volunteers, largely women, began raising the money to provide a proper environment for immigrant Jews who were sick. Beth Israel Hospital was not founded exclusively for Jewish patients, however, but "for the purpose of affording medical care and nursing to sick or disabled persons of any creed or nationality."

On February 4, 1917, the first patient was admitted to the hospital, a converted house with forty-five beds, on Townsend Street in Roxbury. The first year was a trying one and a drastic reorganization was necessary in the spring of 1918. By 1920 morale was high in the busy, well-equipped hospital, and at times there was a long list of patients waiting for admission. This was the beginning of the first long interval — eight years — during which there was no change in leadership of either the board, the administration, or the medical staff. Such continuity was needed for the formulation and implementation of long-range plans, particularly with regard to new construction. The need was already apparent for larger and more modern inpatient quarters — and except for small well-baby and diabetic clinics, there was no room for the outpatient care that was urgently needed.

In the interests of historical accuracy, Arthur J. Linenthal '41 researched and delivered a talk on the occasion of the fiftieth anniversary of the Beth Israel-Harvard Medical School affiliation on December 6, 1977. Dr. Linenthal is professor of medicine at HMS, physician in chief at Hebrew Rehabilitation Center for Aged, and physician at the Beth Israel. He is intimately associated with the hospital, since its first physician in chief, Harry Linenthal '04, was his father.



Indefatigable volunteers: the Beth Israel Hospital obviously needed jonnies (hospital gowns) for its inpatients. Mrs. Tina Burstein, who made the first ones, went knocking on the tailors' doors along Humboldt Avenue in Roxbury, asking for lengths of cloth. No one would give her anything but scraps. However, the tailors promptly realized that they could not refuse to help the Beth Israel, even at some cost to themselves. When Mrs. Burstein finally arrived home she could hardly make her way to the door for all the bolts of material the tailors had left there. The float, for which she dressed as a nurse, was to raise money for the hospital in 1916, the year that it opened.



The male ward of the Beth Israel Hospital circa 1920: fulfilling a need for Jewish patients.

The Townsend Street group, small but dedicated and sophisticated, worked hard to meet high standards of patient care, and formulated new and exciting goals that broadened the objectives of the hospital. For one such goal, striking models were already provided by Jewish-sponsored hospitals in other cities. A sizable, fully-developed, and vigorous Beth Israel could elevate the entire level of Jewish medical practice in Boston by providing important opportunities for Jewish doctors to continue their training. At that time, such opportunities were but rarely available in other Boston hospitals. For the other new goal, there was no model, then, amongst other Jewish-sponsored hospitals in the country. It was envisioned that Beth Israel become a medical school affiliated hospital, with medical student teaching and research as important functions.

Between 1920 and 1928, these needs and goals posed tremendous challenges. The accomplishments during these years were equally great. Beth Israel's move to Brookline Avenue represented fulfillment of hopes for a Jewish-sponsored hospital in Boston — hopes that had been expressed as early as the mid-1890s. Here, with wide and proud community

support, both lay and professional, in new and impressive buildings specifically designed for the purpose, both inpatient and outpatient care could be provided. Also, even before the actual move, formal medical school affiliations had been established. Beth Israel was the first, and for many years the only Jewish-sponsored hospital in the country with such academic status.

There was no argument about the need for enlarged quarters; it was the choice of location — either Townsend Street or the Fenway medical area — that aroused vigorous debate. It would be quite feasible to increase the size of the hospital, as indeed was to be done repeatedly, but virtually impossible ever to change the site.

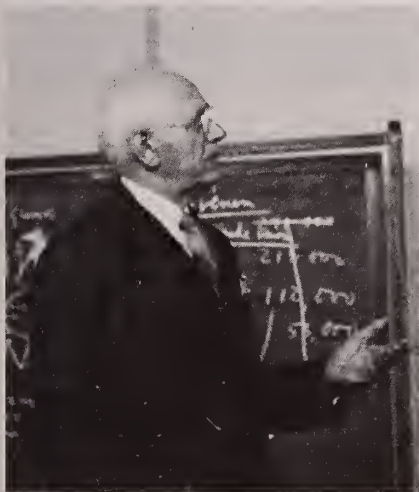
Townsend Street presented many obvious attractions: the land owned by the hospital was large enough and well-suited for new construction; the existing hospital buildings could be useful; the cost would be less than on a new site; the location was near the center of Jewish population; and it was predicted that Townsend Street would always be easily accessible from Jewish centers in the future — Boston neighborhoods have changed, however, and I am sure that we are all aware of the inaccuracy of this prediction.

The attractions of the Fenway site, near Harvard Medical School, Tufts College Medical School (then on Huntington Avenue where Northeastern is now), and a number of hospitals, were less tangible. Such a conspicuous location, it was thought, would confer prestige on the Beth Israel and would contribute to the morale of staff, house officers, and nurses. Opportunities for education of staff and house officers would be enhanced, ready availability of consultants from nearby institutions would be advantageous to patients, and the possibility of medical school relations would be facilitated. Pro-

In recent years I have talked to many people about the early Beth Israel and I have often posed the question: Do you think that the move to Brookline Avenue made any difference to the hospital's further development? Invariably, the answer has been yes.

When the one million dollar drive started, the decision to move from Townsend Street had not yet been made. The campaign began December 6, 1923 with a dinner in Symphony Hall attended by more than 500 people. It must have

Dr. Harry Linenthal: the liaison between Harvard and the Beth Israel, and the first physician in chief.



Dr. Herrman Blumgart: promoted teaching and research as director of the Harvard-Beth Israel program.



Dr. Monroe Schlesinger: the first pathologist, whose research expertise was a boon to the hospital.



ponents of the Fenway site had to contend, however, with an expert hospital consultant who preferred Townsend Street and who thought it inconceivable that Harvard would ever develop a significant relationship with the Beth Israel.

As architect's drawings were being prepared for new buildings — on Townsend Street — and as the choice of site was being debated, extensive plans were being made for a campaign to raise the necessary money. It was estimated that the new buildings would cost about one million dollars. No such enormous amount had ever been solicited for only one project of the Greater Boston Jewish community.

Beth Israel's future depended on the outcome of this campaign. Not only the total raised, but also the rate at which money was pledged, would help hospital leaders answer important questions. Did the Jewish community really want a Jewish hospital; if so, did it want an outstanding one; beyond the money to construct new buildings, was there likely to be the continuing support that would be needed to run the hospital; and, finally, if a more expensive Fenway site should seem to be preferable, would it be financially justifiable to build there.

been worrisome for hospital leaders to know that on the previous evening the annual drive of the Federated Jewish Charities had ended, \$32,000 short of a goal of only \$390,000. The community's response to the Beth Israel, however, was phenomenal. On March 5, 1924, just three months after the start of the campaign, pledges totaled about \$900,000, and for the first time it was announced that the new buildings would be located on Brookline Avenue. (The total cost actually was to be about three million dollars.)

Not until late in 1927, when the new buildings were being completed, did hospital representatives begin formal explorations of the possibility of medical school affiliations. Proximity to both Harvard and Tufts had been a major factor in the choice of location, but did not guarantee that the schools would be interested.

At Harvard, the important planner was Dr. David Edsall, Dean of both the Medical School and the School of Public Health. Without his interest and support no Beth Israel-Harvard tie could have been established at that time. He saw an important opportunity to secure, without cost, conveniently located patients for clinical teaching and, at the same time, expand Harvard's contribution to community health.

Brookline Avenue, 1938:
celebrating ten years
of academic ties.



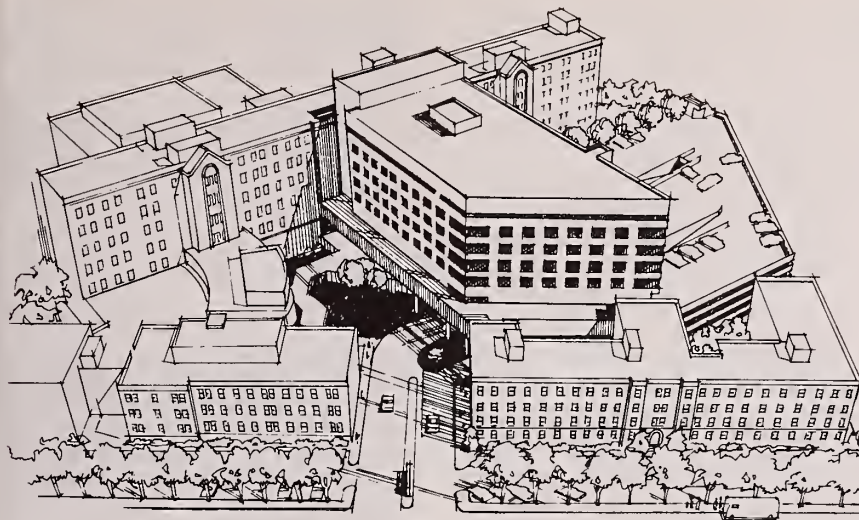
Dr. Edsall's interest in the Beth Israel undoubtedly was heightened by his personal familiarity with a number of the Townsend Street doctors. During his early years as chief of a medical service at the Massachusetts General Hospital, the first Jewish doctors were appointed to the staff there: Dr. Harry Linenthal ('04) in 1913, Dr. Hyman Morrison ('08) in 1915, Dr. Louis Mendelsohn ('04) in 1916, and Dr. Solomon Rubin (Tufts '08) in 1918. Dr. Linenthal worked closely with Dr. Edsall in the Industrial Clinic at the MGH. Since his deanship at first was only part-time, Dr. Edsall maintained an active consultation practice, and was often called by Dr. Linenthal to see private patients. In 1918 Dr. Edsall was appointed to the hospital's Board of Consultants. As further links, two important members of Dr. Edsall's faculties were active Beth Israel supporters — Dr. Harry Solomon at the Medical School and Dr. Milton Rosenau at the School of Public Health.

For Beth Israel, the major initial planners were Mr. Louis Kirstein and Dr. Linenthal. Mr. Kirstein, a prominent merchant and civic figure, was chairman of the Board's Executive Committee and its Committee on Medical School Affiliations. He was to become president of the hospital in 1938. A visiting physician on Townsend Street, Dr. Linenthal became physician in chief when the hospital moved. (There were no chiefs of services in the Townsend Street staff organization.)

Formal discussions led to plans for a Beth Israel-Harvard affiliation similar to those of other Harvard teaching hospitals, but the original arrangement was to involve only the medical service. Dr. Edsall's concept of a teaching unit required hospital agreement on features that were quite controversial then. The physician in charge of the unit was to be full time at the hospital and was to have the privilege of seeing a limited number of private patients there. The appointments of this physician and of other Harvard faculty at Beth Israel were to be made jointly by the school and the hospital. In addition, the hospital was to provide suitable research space and a budget



Townsend Street, 1916:
in the heart of the Jewish community.



On its golden anniversary, 1976:
the dedication of the Feldberg
Building, which serves as a focal point
for clinical care.

of \$20,000 a year. Early in 1928, formal actions occurred quickly. There was agreement by appropriate hospital and school committees and on February 9, 1928, the plan of affiliation was approved by the Administrative Board of the School. Approval by Mr. Lowell, President of Harvard University, followed promptly.

Dr. Edsall was obviously enthusiastic about the new relationship. Early in 1928 he urged that the formalities be completed as soon as possible, so that electives at Beth Israel could be offered to students planning their further studies. Furthermore, he presented to Beth Israel an opportunity which many of us have pursued vigorously in the course of fifty years: "The popularity of any hospital connected with the School depends very largely upon the interest and attention and stimulus that the students get from the personnel in that particular place. It is, therefore, largely up to the individual place as to how popular it is in recruiting students of the better quality."

The success of the early Beth Israel-Harvard relationship would depend to a large extent on the physician in charge of the program. Fortunately, early in the discussions, School and hospital representatives agreed on an exceptional individual for this position — Dr. Hermann L. Blumgart ('21). Then only thirty-two years old, Dr. Blumgart was already recognized as one of the outstanding younger men in medicine because of his brilliant investigative work in the Thorndike Memorial Laboratory at the Boston City Hospital. Encouraged by Dr. Edsall, he saw exciting opportunities in the proposed affiliation. Always the investigator, he regarded the undertaking as an experiment, with himself as the experimental focus. Dr. Edsall, a practical man, suggested that Dr. Blumgart be sure of a position in another Harvard hospital in case the Beth Israel program failed. The experiment, as we all know, succeeded, and Dr. Blumgart was to be active at the Beth Israel for thirty-four years.

As a modern hospital, the Beth Israel would need the talents of highly trained physicians. Pathology and laboratory services had been provided on Townsend Street by a succession of part-time doctors. With the increased size of the hospital a full-time pathologist was clearly needed. It was partly luck and partly foresight that the search, initiated in November 1927 by the Medical Executive Committee, led to the selection of Dr. Monroe J. Schlesinger ('26). He was highly recommended by two Harvard professors with whom he had worked — Dr. Rosenau in preventive medicine and Dr. S. B. Wolbach in pathology, both Beth Israel consultants since 1918. Although his obligation was to maintain services for the hospital, the approval of his appointment by the Board on December 2, 1927 as full-time chief pathologist and head of the laboratories bore great significance for the direction of the hospital, due to his outstanding research abilities. While there was no official action on the part of Harvard regarding this appointment, Dr. Edsall later gave his strong personal approval.

As arrangements were being completed with Harvard, discussions were also underway with Tufts College Medical School. This second affiliation was established in March 1928. Clinical teaching was planned in medicine, surgery, and various specialties under the supervision of the part-time head of each hospital service.

Early in August 1928, the Beth Israel moved from Townsend Street to Brookline Avenue. The early years there were difficult but also exciting. In 1938, when the hospital celebrated its first decade as a Harvard teaching hospital, the accomplishments of those years were praised by then Professor Felix Frankfurter. He wrote: "I know of nothing of Jewish effort in my lifetime in this country in which Jews may take a more just pride than in all that Beth Israel signifies."



Since 1812, The New England Journal of Medicine has played its role in medical circles—reporting the progress of medicine to physicians and medical students throughout the world.



The New England Journal of Medicine

10 SHATTUCK STREET, BOSTON, MASSACHUSETTS 02115

